

# Pre-Feasibility Study

## Surgical Mask Manufacturing Unit



### Small and Medium Enterprises Development Authority (SMEDA)

&

### SME Business Facilitation Center (SMEBFC), Multan

### Ministry of Industries & Production

### Government of Pakistan

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## 1. Disclaimer

This information memorandum is to introduce the subject matter and provide a general idea and information on the said matter. Although, the material included in this document is based on data/information gathered from various reliable sources; however, it is based upon certain assumptions, which may differ from case to case. The information has been provided on, as is where is basis without any warranties or assertions as to the correctness or soundness thereof. Although due care and diligence have been taken to compile this document, the contained information may vary due to any change in any of the concerned factors, and the actual results may differ substantially from the presented information. SMEBFC Multan and SMEDA, their employees or agents do not assume any liability for any financial or other loss resulting from this memorandum in consequence of undertaking this activity. The contained information does not preclude any further professional advice. The prospective user of this memorandum is encouraged to carry out additional diligence and gather any information which is necessary for making an informed decision, including taking professional advice from a qualified consultant / technical expert before making any decision to act upon the information.

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## Document Control

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## 2. Executive Summary

The present COVID-19 pandemic has posed not only health but also economic challenges. Mask is a key measure to suppress transmission and reduces the exponential risk of the disease. International and domestic demand, low investment, availability of raw material, and low-cost skilled labor provide an opportunity for potential entrepreneurs to start a mask manufacturing business.

This pre-feasibility study provides basic information for setting up a Surgical Mask Manufacturing Unit in any industrial area of the 1st and 2nd tier of urban cities across Pakistan. The unit can be set up in an area of 1731 Sq.ft. including raw material storage, manufacturing plant, and storage facility for the finished product.

The product includes a surgical mask of 3 plies that are generally being used in Pakistan. It can be produced, packed, and sold at a competitive price in the market. The unit will produce 194,400 boxes annually at 75% capacity in the first year. Production will increase at 5% annually and maximum capacity will be 90% i.e. 233,280 boxes.

The legal status of Mask Manufacturing Unit is proposed to be as Sole Proprietorship with an estimated total investment of Rs. 4.5 million. This includes a capital investment of Rs. 2.9 million and working capital Rs. 1.6 million. The Net Present Value (NPV), Internal rate of Return (IRR), and the Payback period of this project are Rs 19.6 million, 62%, and 2.32 years respectively. The project will employ 12 individuals including the owner-manager and per piece workers. Higher return on investment and steady business growth are dependent upon the entrepreneur's prior knowledge or experience.

### 3. Introduction to SMEDA and SMEBFC, Multan

The Small and Medium Enterprises Development Authority (SMEDA) was established in October 1998 to provide impetus to the economy through the development of Small and Medium Enterprises (SMEs). With a mission 'to assist in employment generation and value addition to the national income, through the development of the SME sector, by helping increase the number, scale, and competitiveness of SMEs'. Business Development Services are offered to the SMEs by SMEDA including need-based training programs, guidance for business development, and Pre-Feasibility studies for investment opportunities.

SME Business Facilitation Center (SMEBFC) Multan is a PSDP Project of SMEDA, Mol&P, Government of Pakistan. The Facilitation Center, managed by SMEDA, is a one-stop facility for the development requirements of SMEs of the South Punjab region. The Center facilitates information, products, and services related to marketing, technology, support in access to finance, regulatory compliance, business registration, corporatization, taxation, and capacity building support and services to the SMEs and potential entrepreneurs.

Identification of region-specific investment opportunities and Over The Counter (OTC) product development is one of the major components of service delivery of SMEBFC Multan to SMEs and provides important information for the investment decisions to prospective investors.

Concurrent to the pre-feasibility studies, a broad spectrum of business development services is also offered to the SMEs. These services include identification of experts and consultants and delivery of need-based capacity building programs of different types in addition to guidance on various important aspects of business.

### 4. Purpose of the Document

The objective of the pre-feasibility study is primarily to facilitate potential entrepreneurs in project identification for investment. The project pre-feasibility may form the basis of an important investment decision and to serve this objective, the document/study covers various aspects of project concept development, start-up, and production, marketing, finance, and business management.

The purpose of this document is to facilitate potential investors in **Surgical Mask Manufacturing Unit** by providing them with a general understanding of the business to support potential investors in crucial investment decisions.

The need to come up with pre-feasibility reports for undocumented or minimally documented sectors attains greater imminence as the research that precedes such reports reveal certain thumb rules; best practices developed by existing enterprises by trial and error, and certain industrial norms that become a guiding source regarding various aspects of business set-up and its successful management.

Apart from carefully studying the whole document one must consider critical aspects provided later on, which form the basis of any Investment Decision.

## 5. Brief Description of Project & Product

This pre-feasibility is about establishing a mask manufacturing unit. There is a huge potential in the surgical mask manufacturing business due to the current pandemic situation. There is a dramatic increase in the usage of masks in metropolitan cities. The unit will produce 3 plies mask. The annual production capacity of the project is proposed to be 75% in the first year and it will produce 194,400 boxes. With an annual increase of 5%, the maximum annual installed operation capacity is worked at 90%. The raw material (non-woven fabric) will be purchased from Faisalabad, Lahore, Gujranwala, and Karachi. The unit shall be equipped with semi-automatic mask making and ultra-sonic punching machines for preparing mask leaf and punching of ear loop respectively. The unit will be set up in 1<sup>st</sup> or 2<sup>nd</sup> tier industrial area of urban cities. The target markets/customers major cities of Pakistan including, Multan, Bahawalpur, Muzaffargarh, DG Khan, Lahore, Karachi, etc. The project will generate employment for 12 individuals.

### 5.1. Production Process Flow

The production process of mask manufacturing is as following;

#### Step 1: Raw Material Procurement

The first step in the mask-making process is the acquisition of non-woven fabric which includes Polypropylene, Hydrophobic, and Hydrophilic fabric. The raw material used for this three-layer surgical face mask procurement is the most important step in terms of price and product competitiveness.

#### Step 2: Mask Leaf Making

After procurement of the raw material, the fabric coils are installed on a semi-automatic mask leaf making machine. This machine puts the three layers of fabric as per the design and size of the surgical mask. A metallic nose pin is inserted mechanically during the layering process in the mask making machine and edges of the mask are ultrasonically punched together. After joining three layers of nonwoven fabric the mask leaf is cut into identical sizes as per requirement.

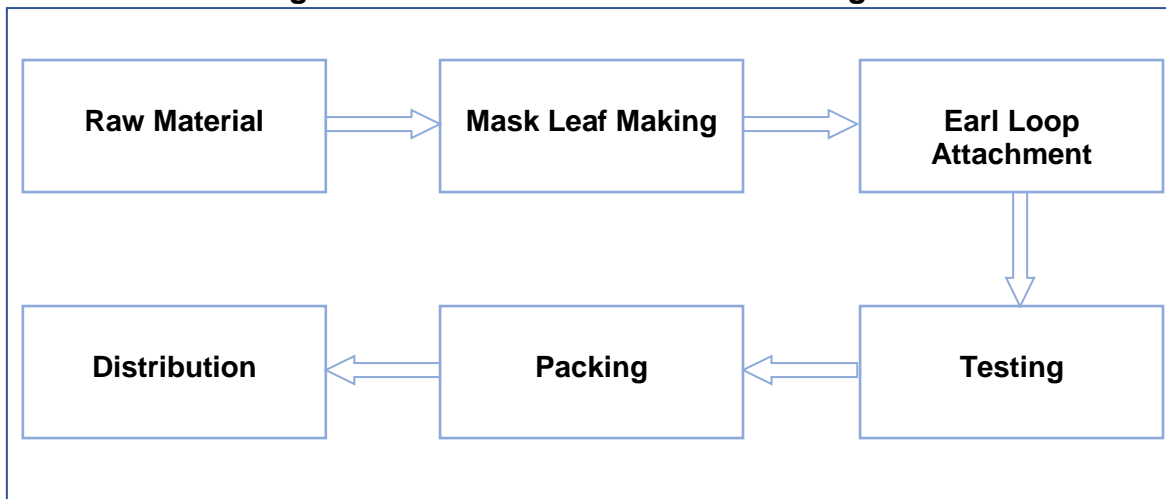
#### Step 3: Ear-Loop Attachment

Ear loops are attached to the mask leaves with an ultrasonic punching machine. Ultrasonic punching machine attaches elastic loop rope by ultrasonic punching.

#### Step 4: Testing and Packaging

The finished masks are tested as per the quality standards. Quality check is a key component of any Personal Protective Equipment (PPE) manufacturing to ensure safety for its users. After quality tests, the product is packed into a box of 50 pieces of masks. These boxes are then stored in a carton.

**Figure 1: Production Process Flow Diagram**



**Step 5: Distribution:**

Packed cartons are distributed in the market after packing as per the purchase orders. Distribution may be carried out by the sellers directly from the manufacturer or supply can be made in shops and markets as per the mutual arrangements.

**5.2. Installed and Operational Capacities**

For Surgical Mask manufacturing, an area of 1731 Sq.ft. is proposed on a rental basis considering the financial viability of the business. The unit will produce 194,400 boxes during 1<sup>st</sup> year at an installed initial operational capacity of 75%. With an annual increase of 5%, the maximum capacity is worked out at 90 %.

For the production of the stated capacity, the following machinery is required:

- Semi-Automatic Mask Making Machine
- Ultra-Sonic Punching Machine

**6. Critical Factors**

Following are the factors that are critical for the success of this venture;

- Availability of quality raw material supplies at economical prices on a continuous basis.
- Technical knowledge and strict monitoring of the production process to ensure product quality.
- Proximity of the unit for market access and raw material availability.
- Competitive pricing and marketing strategies for a healthy sales cycle.
- Compliance regarding local and international standards.

- Ability to generate work orders through industrial networking, direct marketing, and negotiating long-term contracts.

## 7. Geographical Potential for Investment

For the success of this project, accessibility to raw material, availability of skilled labor, and easy transportation of finished goods are important factors. Therefore, the cities of South Punjab including Multan, Bahawalpur, Jhang, DG Khan, etc. are suitable for this project. The establishment of the unit in these cities would have the advantage of being close to large customer base, which may lead to consistent orders and referrals.

## 8. Potential Target Customers / Markets

Surgical Mask manufacturing is a growing business segment in Pakistan due to changes in the lifestyle of the people in the existing COVID-19 scenario. The target market for this unit includes health care service delivery units, educational institutes, health professionals, shopping malls, and government agencies. This industry has already rich demand in metropolitan cities of Pakistan. Yet, there is a growing need for the product in Multan, DG Khan, Bahawalpur, Rahim Yar Khan, Sukkur, Shikarpur, etc.

## 9. Project Cost Summary

### 9.1. Project Economics

The figures in this financial model have been calculated for estimated sale revenues of Rs. 28.9 million in year one. The capacity utilization during year one is worked out at 75% with a 5% increase in subsequent years up to the maximum capacity utilization of 90%.

The following table shows an internal rate of return, payback period, and net present value of the proposed business.

Table 1: Project Economics

Description	Details
Internal Rate of Return (IRR)	62%
Payback Period (yrs.)	2.32
Net Present Value (Rs.)	19.6 M

### 9.2. Project Financing

The following table provides details of the equity required and variables related to a bank loan;



**Table 2: Project Financing**

Description	Details
Total Equity (100%)	Rs. 4.5 M
Bank Loan	-
Markup to the Borrower (% age/annum)	-
Tenure of the Loan (Years)	-

### 9.3. Project Cost

Following fixed and working capital requirements have been identified for operations of the proposed business.

**Table 3: Project Cost**

Description	Amount Rs.
<b>Capital Cost</b>	
Machinery & equipment	2,220,000
Furniture & fixtures	206,750
Office vehicles	115,500
Office equipment	2,500
Computer equipment	40,000
Building Security	105,000
Pre-operating costs	215,500
<b>Total Capital Cost</b>	<b>2,905,250</b>
<b>Working Capital</b>	
Equipment spare part inventory	5,550
Raw material inventory	718,031
Upfront building rent	105,000
Upfront insurance payment	5,775
Cash	776,976
<b>Total Working Capital</b>	<b>1,611,332</b>
<b>Total Project Cost</b>	<b>4,516,582</b>

#### 9.4. Space Requirement

The space requirement for the proposed Surgical Mask Manufacturing Unit is estimated considering various facilities including management office, production hall, storage, etc. Space requirement for the setup of the proposed unit requires a 6.35 Marla plot (1,731 Sq.ft.). This space is proposed to be acquired on a rental basis considering the project cost and nature of the business. Details of space requirement and cost related to land & building are given below;

**Table 4: Space Requirement (on Rental Basis)**

Description	Estimated Area (Sq.ft.)	Cost per Sq.ft. (Rs.)	Total Cost (Rs.)
Admin Block	450	20.22	9,095
Production Block	551	20.22	11,140
Finished goods/Material Store	730	20.22	14,770
<b>Total</b>	<b>1,731</b>	<b>31.00</b>	<b>35,000</b>

#### 9.5. Machinery & Equipment Requirement

Plant, machinery, and equipment for the proposed project are stated below.

**Table 5: Machinery & Equipment**

Description	Quantity (No.)	Unit Cost (Rs.)	Total Cost (Rs.)
Mask Making Machine	1	1,700,000	1,700,000
Ultra-Sonic Punching Machine	6	70,000	420,000
Generator (4KW)	1	100,000	100,000
<b>Total</b>			<b>2,220,000</b>

#### 9.6. Furniture & Fixtures Requirement

Details of the furniture and fixture required for the project are given below;

**Table 6: Furniture & Fixture**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Office Tables	2	10,000	20,000
Chairs	4	4,000	16,000
Large Table (8"x5") for packing	2	10,000	20,000
Sitting Benches	8	2,500	20,000
Stool	4	2,000	8,000
Seiling Fans	5	4,000	20,000
Energy Saver Lights	15	250	3,750
Water Cooler	1	20,000	20,000
Air Conditioner	1	70,000	70,000
Fire Extinguishers	2	4,500	9,000
<b>Total</b>			<b>206,750</b>

### 9.7. Office Equipment Requirement

Following office equipment will be required for the Surgical Mask Manufacturing Unit;

**Table 7: Office Equipment**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Telephone Sets	1	2,500	2,500
<b>Total</b>			<b>2,500</b>

### 9.8. Raw Material Requirements

The following table provides the details and cost of raw material for producing one mask.

**Table 8: Raw Material Requirement**

Description	Unit	Cost per unit	Qty. (No.) Produced	Cost per unit (Rs per Mask)
Non-Woven Fabric (3 Layers)	KG	400	348	1.15
Nose Pin	KG	1100	7,333	0.15
Elastic Ear Loop	KG	600	2,400	0.25
Packing Box + Carton	Box	5	50	0.30
<b>Cost per unit</b>				<b>Rs. 1.85</b>

### 9.9. Human Resource Requirement

In order to run operations of Surgical Mask Manufacturing Unit smoothly, details of human resources required along with the number of employees and monthly salary are recommended as under;

**Table 9: Human Resource Requirement**

Description	No. of Employees	Monthly Salary per person (Rs.)
Owner/Manager	1	50,000
Accounts Officer	1	30,000
Machine Operators	1	25,000
Helper/Driver	1	18,000
Office Boys	1	17,500
Marketing Executive	1	25,000
<b>Total</b>	<b>6</b>	<b>165,500</b>

### 9.10. Revenue Generation

For the first year, production capacity utilization is estimated to be 75%. There will be a 5% growth in production in each coming year up to a maximum capacity of 90%. The sales revenue during the first year of operations is estimated as under;

**Table 10: Revenue Generation – Year 1**

Description	No. of Units Produced (No.)	Finished Goods Inventory (No.)	Units available for Sale (No.)	Sale Price/unit (Rs.)	Sales Revenue (Rs.)
Surgical Mask (3ply)	194,400	8,100	186,300	155	28,876,500
<b>Total</b>					<b>28,876,500</b>

### 9.11. Utilities and other costs

An essential cost to be borne by the project is the cost of electricity. The electricity expenses of the project are estimated at Rs. 41,680/- thousand per month. This expense will cost 500,165 /- annually. Furthermore, the promotional expense of the Surgical Mask Manufacturing Unit is estimated as 0.5% of administrative / Cost of Sales expenses for the first three years. After three years the promotional expenses are estimated to remain 80% of the previous year.

## 10. Contact Details

To facilitate potential investors, contact details of private sector Service Providers relevant to the proposed project be given.

### 10.1. Machinery Suppliers

Name of Supplier	Address	Phone
Good Plus (Mr. Abdul Waris)	Muslim Town, Lahore	0311-4043735
Shahid Raza	Latifabad, near Govt Sardar Begum School, Sialkot, Punjab	0333-8718844
Evergreen Enterprises	Alang Road, Dolat Gate, Multan	(+92) 300 8632361

### 10.2. Technical Experts / Consultants

Name of Expert/Organization	Address	Phone	Website
M Bilal	Shah Rukn e aalam, Multan	(+92) 303 7395335	
EverGreen Enterprises (Hameed ullah Khan)	Alang Road, Dolat Gate, Multan	(+92) 300 8632361	
Eco-Friendly Enterprises Mr. Zohair	315 Street 3, I-9/3 I 9/3 I-9, ICT Islamabad	(+92) 311 5888689 (+92) 317 8090447	www.ecofriendly.com.pk

**10.3. Raw Material Suppliers**

Name of Supplier	Address	Phone	E-mail	Website
K&A Textiles	Latif Garden Manawala Faisalabad	+92 41 875 1730	katextiles@k atextiles.com	www.katex tiles.com/
Acewine International Co. (Mr. Muhammad Tariq Yaqoob)	12-G / F, Aftab Aslam Plaza, Sargodha Road, Faisalabad	92-56-6300020 923044098428		
Gohar Textile Mills (Pvt.) Ltd.	3-k.m. Jhumra Road, Khurrianwala, Faisalabad, Pakistan.	+92 41 4362290	info@chawal a.com.pk	www.chaw ala.com.pk

**11. Useful Web Links**

<b>Small &amp; Medium Enterprises Development Authority (SMEDA)</b>	<a href="http://www.smeda.org.pk">www.smeda.org.pk</a>
<b>Government of Pakistan</b>	<a href="http://www.pakistan.gov.pk">www.pakistan.gov.pk</a>
<b>Ministry of Industries &amp; Production</b>	<a href="http://www.moip.gov.pk">www.moip.gov.pk</a>
<b>Government of Punjab</b>	<a href="http://www.punjab.gov.pk">www.punjab.gov.pk</a>
<b>Government of Sindh</b>	<a href="http://www.sindh.gov.pk">www.sindh.gov.pk</a>
<b>Government of Khyber Pakhtunkhwa</b>	<a href="http://www.khyberpakhtunkhwa.gov.pk">www.khyberpakhtunkhwa.gov.pk</a>
<b>Government of Baluchistan</b>	<a href="http://www.balochistan.gov.pk">www.balochistan.gov.pk</a>
<b>Government of Gilgit Baltistan</b>	<a href="http://www.gilgitbaltistan.gov.pk">www.gilgitbaltistan.gov.pk</a>
<b>Government of Azad Jammu Kashmir</b>	<a href="http://www.ajk.gov.pk">www.ajk.gov.pk</a>
<b>Trade Development Authority of Pakistan (TDAP)</b>	<a href="http://www.tdap.gov.pk">www.tdap.gov.pk</a>
<b>Security Commission of Pakistan (SECP)</b>	<a href="http://www.secp.gov.pk">www.secp.gov.pk</a>
<b>Federation of Pakistan Chambers of Commerce and Industry (FPCCI)</b>	<a href="http://www.fpcci.com.pk">www.fpcci.com.pk</a>
<b>State Bank of Pakistan (SBP)</b>	<a href="http://www.sbp.org.pk">www.sbp.org.pk</a>
<b>Punjab Small Industries Corporation</b>	<a href="http://www.psic.gop.pk">www.psic.gop.pk</a>
<b>Sindh Small Industries Corporation</b>	<a href="http://www.ssic.gos.pk">www.ssic.gos.pk</a>
<b>Punjab Vocational Training Council (PVTTC)</b>	<a href="http://www.pvtc.gop.pk">www.pvtc.gop.pk</a>
<b>Technical Education and Vocational Training Authority (TEVTA)</b>	<a href="http://www.tevta.org">www.tevta.org</a>
<b>Punjab Industrial Estates (PIE)</b>	<a href="http://www.pie.com.pk">www.pie.com.pk</a>
<b>Faisalabad Industrial Estate Development and Management Company (FIEDMC)</b>	<a href="http://www.fiedmc.com.pk">www.fiedmc.com.pk</a>

## 12. Annexures

### 12.1. Income Statement

Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	Rs. in actuals									
Revenue	28,876,500	35,262,810	41,219,739	48,015,426	52,939,513	58,233,465	64,056,811	70,462,492	77,508,742	85,259,616
Cost of goods sold	23,825,661	28,605,616	32,936,164	37,834,072	41,205,944	44,817,642	48,788,393	53,153,997	57,953,827	63,231,190
Gross Profit	5,050,839	6,657,194	8,283,575	10,181,354	11,733,570	13,415,823	15,268,418	17,308,496	19,554,914	22,028,426
<i>General administration &amp; selling expenses</i>										
Administration expense	1,854,600	2,040,060	2,244,066	2,468,473	2,715,320	2,986,852	3,285,537	3,614,091	3,975,500	4,373,050
Rental expense	420,000	462,000	508,200	559,020	614,922	676,414	744,056	818,461	900,307	990,338
Utilities expense	-	-	-	-	-	-	-	-	-	-
Travelling & Comm. expense (phone, fax, etc.)	143,310	157,641	173,405	190,746	209,820	230,802	253,882	279,271	307,198	337,917
Office vehicles running expense	23,100	25,410	27,951	30,746	33,821	37,203	40,923	45,015	49,517	54,469
Office expenses (stationary, etc.)	67,440	74,184	81,602	89,763	98,739	108,613	119,474	131,421	144,564	159,020
Promotional expense	144,383	129,944	116,950	105,255	94,729	85,256	76,731	69,058	62,152	55,937
Insurance expense	5,775	4,620	3,465	2,310	1,155	9,301	7,441	5,580	3,720	1,860
Professional fees (legal, audit, etc.)	72,191	88,157	103,049	120,039	132,349	145,584	160,142	176,156	193,772	213,149
Depreciation expense	279,475	279,475	279,475	281,956	281,556	295,797	298,668	298,205	298,205	301,529
Amortization expense	43,100	43,100	43,100	43,100	43,100	-	-	-	-	-
Connection charges	-	-	-	-	-	-	-	-	-	-
Property tax expense	-	-	-	-	-	-	-	-	-	-
Miscellaneous expense	93,895	108,532	123,031	139,345	153,463	168,810	185,691	204,260	224,686	247,154

Subtotal	3,147,269	3,413,123	3,704,295	4,030,751	4,378,974	4,744,631	5,172,545	5,641,519	6,159,620	6,734,424
Operating Income	1,903,571	3,244,070	4,579,280	6,150,603	7,354,596	8,671,192	10,095,874	11,666,977	13,395,294	15,294,002
Other income	30,388	80,348	178,135	306,388	464,040	648,618	864,849	1,113,373	1,396,254	1,777,506
Gain / (loss) on sale of assets	-	-	10,000	-	47,200	21,576	-	-	34,977	27,924
Earnings Before Interest & Taxes	1,933,959	3,324,418	4,767,414	6,456,991	7,865,836	9,341,386	10,960,722	12,780,350	14,826,525	17,099,432
Interest expense	-	-	-	-	-	-	-	-	-	-
Earnings Before Tax	1,933,959	3,324,418	4,767,414	6,456,991	7,865,836	9,341,386	10,960,722	12,780,350	14,826,525	17,099,432
Tax	180,094	451,105	850,224	1,379,946	1,873,042	2,389,485	2,956,252	3,593,122	4,309,283	5,104,801
<b>NET PROFIT/(LOSS) AFTER TAX</b>	<b>1,753,865</b>	<b>2,873,314</b>	<b>3,917,190</b>	<b>5,077,044</b>	<b>5,992,794</b>	<b>6,951,901</b>	<b>8,004,470</b>	<b>9,187,228</b>	<b>10,517,242</b>	<b>11,994,631</b>
Balance brought forward		1,753,865	4,627,179	8,544,369	13,621,413	19,614,207	26,566,108	34,570,578	43,757,806	54,275,047
Total profit available for appropriation	1,753,865	4,627,179	8,544,369	13,621,413	19,614,207	26,566,108	34,570,578	43,757,806	54,275,047	66,269,678
Dividend	-	-	-	-	-	-	-	-	-	-
Balance carried forward	1,753,865	4,627,179	8,544,369	13,621,413	19,614,207	26,566,108	34,570,578	43,757,806	54,275,047	66,269,678



## 12.2. Balance Sheet

<b>Balance Sheet</b>											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Rs. in actuals Year 10
<b>Assets</b>											
<i>Current assets</i>											
Cash & Bank	776,976	1,248,893	4,107,632	7,768,013	12,657,870	18,278,103	24,963,082	32,693,496	41,531,380	51,552,215	66,948,179
Accounts receivable	-	1,186,705	1,317,931	1,571,559	1,833,599	2,074,417	2,284,376	2,512,814	2,764,095	3,040,505	3,344,555
Finished goods inventory	-	1,035,898	1,195,013	1,375,712	1,580,077	1,716,914	1,867,402	2,032,850	2,214,750	2,414,743	2,634,633
Equipment spare part inventory	5,550	6,119	6,746	7,438	8,200	9,040	9,967	10,989	12,115	13,357	-
Raw material inventory	718,031	920,672	1,130,011	1,382,125	1,600,059	1,848,068	2,134,518	2,465,369	2,847,501	3,288,864	-
Pre-paid annual land lease	-	-	-	-	-	-	-	-	-	-	-
Pre-paid building rent	105,000	115,500	127,050	139,755	153,731	169,104	186,014	204,615	225,077	247,585	-
Pre-paid lease interest	-	-	-	-	-	-	-	-	-	-	-
Pre-paid insurance	5,775	4,620	3,465	2,310	1,155	9,301	7,441	5,580	3,720	1,860	-
<b>Total Current Assets</b>	<b>1,611,332</b>	<b>4,518,408</b>	<b>7,887,848</b>	<b>12,246,912</b>	<b>17,834,690</b>	<b>24,104,946</b>	<b>31,452,800</b>	<b>39,925,713</b>	<b>49,598,638</b>	<b>60,559,127</b>	<b>72,927,367</b>
<i>Fixed assets</i>											
Land	-	-	-	-	-	-	-	-	-	-	-
Building/Infrastructure	-	-	-	-	-	-	-	-	-	-	-
Wapda Security	-	-	-	-	-	-	-	-	-	-	-
Building security	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000
Machinery & equipment	2,220,000	1,998,000	1,776,000	1,554,000	1,332,000	1,110,000	888,000	666,000	444,000	222,000	-
Furniture & fixtures	206,750	186,075	165,400	144,725	124,050	103,375	82,700	62,025	41,350	20,675	-
Office vehicles	115,500	92,400	69,300	46,200	23,100	186,014	148,811	111,608	74,406	37,203	-

Computer equipment	40,000	26,800	13,600	46,705	31,024	15,744	54,067	35,915	18,225	62,589	41,576
Office equipment	2,500	2,000	1,500	1,000	500	3,191	2,553	1,914	1,276	638	-
<b>Total Fixed Assets</b>	<b>2,689,750</b>	<b>2,410,275</b>	<b>2,130,800</b>	<b>1,897,630</b>	<b>1,615,674</b>	<b>1,523,323</b>	<b>1,281,131</b>	<b>982,462</b>	<b>684,257</b>	<b>448,105</b>	<b>146,576</b>
<i>Intangible assets</i>											
Pre-operation costs	215,500	172,400	129,300	86,200	43,100	-	-	-	-	-	-
Legal, licensing, & training costs	-	-	-	-	-	-	-	-	-	-	-
<b>Total Intangible Assets</b>	<b>215,500</b>	<b>172,400</b>	<b>129,300</b>	<b>86,200</b>	<b>43,100</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL ASSETS</b>	<b>4,516,582</b>	<b>7,101,083</b>	<b>10,147,948</b>	<b>14,230,742</b>	<b>19,493,465</b>	<b>25,628,269</b>	<b>32,733,931</b>	<b>40,908,175</b>	<b>50,282,895</b>	<b>61,007,232</b>	<b>73,073,943</b>
<b>Liabilities &amp; Shareholders' Equity</b>											
<i>Current liabilities</i>											
Accounts payable	-	830,636	1,004,187	1,169,791	1,355,469	1,497,481	1,651,241	1,821,016	2,008,507	2,215,603	2,287,683
Export re-finance facility	-	-	-	-	-	-	-	-	-	-	-
Short term debt	-	-	-	-	-	-	-	-	-	-	-
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
<b>Total Current Liabilities</b>	<b>-</b>	<b>830,636</b>	<b>1,004,187</b>	<b>1,169,791</b>	<b>1,355,469</b>	<b>1,497,481</b>	<b>1,651,241</b>	<b>1,821,016</b>	<b>2,008,507</b>	<b>2,215,603</b>	<b>2,287,683</b>
<i>Other liabilities</i>											
Lease payable	-	-	-	-	-	-	-	-	-	-	-
Deferred tax	-	-	-	-	-	-	-	-	-	-	-
Long term debt	-	-	-	-	-	-	-	-	-	-	-
<b>Total Long-Term Liabilities</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<i>Shareholders' equity</i>											
Paid-up capital	4,516,582	4,516,582	4,516,582	4,516,582	4,516,582	4,516,582	4,516,582	4,516,582	4,516,582	4,516,582	4,516,582

Retained earnings	-	1,753,865	4,627,179	8,544,369	13,621,413	19,614,207	26,566,108	34,570,578	43,757,806	54,275,047	66,269,678
Total Equity	4,516,582	6,270,447	9,143,761	13,060,951	18,137,995	24,130,789	31,082,690	39,087,160	48,274,388	58,791,629	70,786,260
<b>TOTAL CAPITAL AND LIABILITIES</b>	4,516,582	7,101,083	10,147,948	14,230,742	19,493,465	25,628,269	32,733,931	40,908,175	50,282,895	61,007,232	73,073,943

*Note: Total assets value will differ from project cost due to first installment of leases paid at the start of year 0*

### 12.3. Cash Flow Statement

Cash Flow Statement											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Rs. in actuals Year 10
<i>Operating activities</i>											
Net profit	-	1,753,865	2,873,314	3,917,190	5,077,044	5,992,794	6,951,901	8,004,470	9,187,228	10,517,242	11,994,631
Add: depreciation expense	-	279,475	279,475	279,475	281,956	281,556	295,797	298,668	298,205	298,205	301,529
amortization expense	-	43,100	43,100	43,100	43,100	43,100	-	-	-	-	-
Deferred income tax	-	-	-	-	-	-	-	-	-	-	-
Accounts receivable	-	(1,186,705)	(131,226)	(253,628)	(262,040)	(240,817)	(209,960)	(228,438)	(251,281)	(276,410)	(304,050)
Finished good inventory	-	(1,035,898)	(159,114)	(180,699)	(204,365)	(136,837)	(150,487)	(165,448)	(181,900)	(199,993)	(219,890)
Equipment inventory	(5,550)	(569)	(627)	(691)	(762)	(840)	(927)	(1,022)	(1,126)	(1,242)	13,357
Raw material inventory	(718,031)	(202,641)	(209,339)	(252,115)	(217,933)	(248,009)	(286,451)	(330,850)	(382,132)	(441,363)	3,288,864
Pre-paid building rent	(105,000)	(10,500)	(11,550)	(12,705)	(13,976)	(15,373)	(16,910)	(18,601)	(20,462)	(22,508)	247,585
Pre-paid lease interest	-	-	-	-	-	-	-	-	-	-	-
Advance insurance premium	(5,775)	1,155	1,155	1,155	1,155	(8,146)	1,860	1,860	1,860	1,860	1,860
Accounts payable	-	830,636	173,551	165,604	185,678	142,011	153,760	169,775	187,492	207,096	72,080
Other liabilities	-	-	-	-	-	-	-	-	-	-	-

Cash provided by operations	(834,356)	471,917	2,858,739	3,706,686	4,889,857	5,809,438	6,738,583	7,730,414	8,837,883	10,082,888	15,395,964
<i>Financing activities</i>											
Change in long term debt	-	-	-	-	-	-	-	-	-	-	-
Change in short term debt	-	-	-	-	-	-	-	-	-	-	-
Change in export re-finance facility	-	-	-	-	-	-	-	-	-	-	-
Add: land lease expense	-	-	-	-	-	-	-	-	-	-	-
Land lease payment	-	-	-	-	-	-	-	-	-	-	-
Change in lease financing	-	-	-	-	-	-	-	-	-	-	-
Issuance of shares	4,516,582	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares	-	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing activities	4,516,582	-	-	-	-	-	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(2,905,250)	-	-	(46,305)	-	(189,205)	(53,604)	-	-	(62,053)	-
Acquisitions	-	-	-	-	-	-	-	-	-	-	-
Cash (used for) / provided by investing activities	(2,905,250)	-	-	(46,305)	-	(189,205)	(53,604)	-	-	(62,053)	-
<b>NET CASH</b>	<b>776,976</b>	<b>471,917</b>	<b>2,858,739</b>	<b>3,660,381</b>	<b>4,889,857</b>	<b>5,620,233</b>	<b>6,684,979</b>	<b>7,730,414</b>	<b>8,837,883</b>	<b>10,020,835</b>	<b>15,395,964</b>

## 13.Key Assumptions

### 13.1. Operating Cost Assumptions

Description	Details
Shift Length	08 Hours
Number of Shifts	01 per day
Operation Days per Year	300 days

### 13.2. Production Cost Assumptions

Description	Details
Cost per Box (50Pcs per box)	Rs. 125/-
Increase in Cost Price	10%
Production Capacity per Year	194,400 /- Boxes
Production Capacity Utilization in Year 1	75%

### 13.3. Revenue Assumptions

Description	Details
Sale Price Per Box	Rs. 155/-
Increase in Sale Price per Box each Year	10%

### 13.4. Financial Assumptions

Description	Details
Project Life	10 Year
Debt to Equity Ratio	0:100

## 14. Reference

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3. [https://www.edana.org/docs/default-source/publications/how-medical-masks-are-made-bottlenecks-and-solutions.pdf?sfvrsn=a8fb647c\\_7](https://www.edana.org/docs/default-source/publications/how-medical-masks-are-made-bottlenecks-and-solutions.pdf?sfvrsn=a8fb647c_7)
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